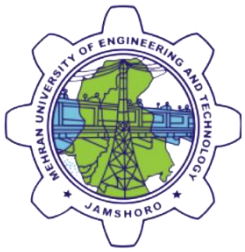


# OOP PROJECT REPORT

## OBE WEIGHTAGE APP

SUBMITTED TO:

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## INTRODUCTION

Outcome-based education (OBE) is an educational theory that centres each component of a learning system on achieving specific outcomes (goals). Each student should have accomplished the goal by the end of the educational experience.

When developing curricula and outcomes, it focuses on the following skills:

- Life skills
- Fundamental skills
- Professional and vocational skills
- Intellectual skills
- Interpersonal and interpersonal skills

## ABOUT THE APPLICATION

Outcome Based Education (OBE) assists higher education institutions in analyzing, assessing, and mapping the lessons learned by students based on the questions attempted to achieve Program Learning Outcomes (PLOs) and Course Learning Outcomes (CLOs).

We created a working application in this project that can be used to calculate the OBE weightage of a particular CLO (course learning outcome) for both theory and practical subjects.

When the corresponding button is pressed, the theory or practical class is launched, the window for calculating the obe weightage of that subject's theory or practical is presented.

When the respective theory or practical marks are provided, the "Check OBE Weightage" button will reveal the percentages for each CLO, and the back button will bring up the main window again.

# SOURCE CODE

## MAIN CLASS

```
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.awt.event.WindowAdapter;
import java.awt.event.WindowEvent;
public class Main {
Main(){
    final Frame f=new Frame();
    Label headText=new Label("OBE Weightage Calculator", Label.CENTER);
    Label headsubText=new Label("Calculate OBE weightage for theory and practical subjects", Label.CENTER);
    Label infoText=new Label("Select the type of subject for which you want to calculate OBE weightage", Label.CENTER);
    //Theory Button
            Button theoryBtn=new Button("Theory");
            theoryBtn.setBounds(215,220,100,40);
            theoryBtn.setFont(new Font("Arial",Font.PLAIN,18));
            theoryBtn.addActionListener(new ActionListener() {

                public void actionPerformed(ActionEvent e) {
                    f.dispose();
                    Theory ob=new Theory();
                }});
        //Practical Button
            Button practicalBtn=new Button("Practical");
            practicalBtn.setBounds(365,220,100,40);
            practicalBtn.setFont(new Font("Arial",Font.PLAIN,18));
            practicalBtn.addActionListener(new ActionListener() {
                public void actionPerformed(ActionEvent e) {
                    f.dispose();
                    Practical ob=new Practical();
                }});

    //setBounds
    headText.setBounds(0,50,680,50);
    headText.setFont(new Font("Arial",Font.PLAIN,34));
    headsubText.setBounds(0,100,680,50);
    headsubText.setFont(new Font("Arial",Font.PLAIN,18));
    infoText.setBounds(0,130,680,50);
    infoText.setFont(new Font("Arial",Font.PLAIN,16));

    //adding components
    f.add(headText);
    //f.add(headsubText);
    f.add(infoText);
    f.add(theoryBtn);
    f.add(practicalBtn);
    theoryBtn.setBackground(Color.LIGHT_GRAY);
    theoryBtn.setFocusable(false);
    practicalBtn.setBackground(Color.LIGHT_GRAY);
    practicalBtn.setFocusable(false);

    f.setBackground(Color.LIGHT_GRAY);
    f.setSize(680,500);
    f.setLayout(null);
    f.setVisible(true);

    //Making Close Button Work
    f.addWindowListener(new WindowAdapter() {
        public void windowClosing(WindowEvent we) {
            f.dispose();}});

}
    public static void main(String[] args) {
        new Main();
    }

}
```

## THEORY CLASS

```
import java.awt.*;
public class Theory {
Theory(){
     final Frame f=new Frame();
     Label headText=new Label("OBE Weightage Calculator", Label.CENTER);
     Label headsubText=new Label("For Theory", Label.CENTER);

     Label clo1=new Label("CLO-1");
     Label clo2=new Label("CLO-2");
     Label clo3=new Label("CLO-3");

     Label mid=new Label("Mid", Label.CENTER);
     Label sess=new Label("Sessional", Label.CENTER);
     Label fin=new Label("Final", Label.CENTER);
     Label tmarks=new Label("Total", Label.CENTER);

     final Label psess1=new Label("", Label.CENTER);
     final Label pmid1=new Label("", Label.CENTER);
     final Label pfin1=new Label("", Label.CENTER);

     final Label psess2=new Label("", Label.CENTER);
     final Label pmid2=new Label("", Label.CENTER);
     final Label pfin2=new Label("", Label.CENTER);

     final Label psess3=new Label("", Label.CENTER);
     final Label pmid3=new Label("", Label.CENTER);
     final Label pfin3=new Label("", Label.CENTER);

     final TextField mid1=new TextField();
     final TextField sess1=new TextField();
     final TextField fin1=new TextField();
     final TextField tmarks1=new TextField();

     final TextField mid2=new TextField();
     final TextField sess2=new TextField();
     final TextField fin2=new TextField();
     final TextField tmarks2=new TextField();

     final TextField mid3=new TextField();
     final TextField sess3=new TextField();
     final TextField fin3=new TextField();
     final TextField tmarks3=new TextField();

     Font myFont = new Font("Arial",Font.PLAIN,18);
     headText.setBounds(0,50,680,50);
     headText.setFont(new Font("Arial",Font.PLAIN,34));
     headsubText.setBounds(0,90,680,50);
     headsubText.setFont(new Font("Arial",Font.PLAIN,24));

     clo1.setBounds(90,200,80,20);
     clo2.setBounds(90,280,80,20);
     clo3.setBounds(90,360,80,20);
     clo1.setFont(myFont);
     clo2.setFont(myFont);
     clo3.setFont(myFont);

     sess.setBounds(178,160,80,20);
     mid.setBounds(270,160,80,20);
     fin.setBounds(360,160,80,20);
     tmarks.setBounds(500,160,80,20);
     sess.setFont(myFont);
     mid.setFont(myFont);
     fin.setFont(myFont);
     tmarks.setFont(myFont);

     sess1.setBounds(180,200,80,20);
     mid1.setBounds(270,200,80,20);
     fin1.setBounds(360,200,80,20);
```

```
psess1.setBounds(180,230,80,20);
pmid1.setBounds(270,230,80,20);
pfin1.setBounds(360,230,80,20);
tmarks1.setBounds(500,200,80,20);

sess2.setBounds(180,280,80,20);
mid2.setBounds(270,280,80,20);
fin2.setBounds(360,280,80,20);
psess2.setBounds(180,310,80,20);
pmid2.setBounds(270,310,80,20);
pfin2.setBounds(360,310,80,20);
tmarks2.setBounds(500,280,80,20);

sess3.setBounds(180,360,80,20);
mid3.setBounds(270,360,80,20);
fin3.setBounds(360,360,80,20);
psess3.setBounds(180,390,80,20);
pmid3.setBounds(270,390,80,20);
pfin3.setBounds(360,390,80,20);
tmarks3.setBounds(500,360,80,20);

//Checking OBE
Button checkOBE=new Button("Check OBE Weightage");
checkOBE.setBounds(230,420,220,40);
checkOBE.setFont(new Font("Arial",Font.PLAIN,15));
checkOBE.addActionListener(new ActionListener() {

    public void actionPerformed(ActionEvent e) {
        //CLO-1
        if(!tmarks1.getText().equals("")) {
            float total1=Integer.parseInt(tmarks1.getText());
            if(total1>0){
                if(!sess1.getText().equals("")) {
                float sessMarks1=Integer.parseInt(sess1.getText());
                double a=Math.round((sessMarks1/total1)*100);
                    psess1.setText(Double.toString(a) + " %");
                }
                if(!mid1.getText().equals("")) {
                    float midMarks1=Integer.parseInt(mid1.getText());
                    double a=Math.round((midMarks1/total1)*100);
                    pmid1.setText(Double.toString(a) + " %");
                }
                if(!fin1.getText().equals("")) {
                    float finMarks1=Integer.parseInt(fin1.getText());
                    double a=Math.round((finMarks1/total1)*100);
                    pfin1.setText(Double.toString(a) + " %");
                }
            };
        }
        //CLO-2
        if(!tmarks2.getText().equals("")) {
            float total2=Integer.parseInt(tmarks2.getText());
            if(total2>0){
                if(!sess2.getText().equals("")) {
                float sessMarks2=Integer.parseInt(sess2.getText());
                double a=Math.round((sessMarks2/total2)*100);
                    psess2.setText(Double.toString(a) + " %");
                }
                if(!mid2.getText().equals("")) {
                    float midMarks2=Integer.parseInt(mid2.getText());
                    double a=Math.round((midMarks2/total2)*100);
                    pmid2.setText(Double.toString(a) + " %");
                }
                if(!fin2.getText().equals("")) {
                    float finMarks2=Integer.parseInt(fin2.getText());
                    double a=Math.round((finMarks2/total2)*100);
                    pfin2.setText(Double.toString(a) + " %");
                }
```

```
            };
        }
        //CLO-3
        if(!tmarks3.getText().equals("")) {
            float total3=Integer.parseInt(tmarks3.getText());
            if(total3>0){
                if(!sess3.getText().equals("")) {
                float sessMarks3=Integer.parseInt(sess3.getText());
                double a=Math.round((sessMarks3/total3)*100);
                    psess3.setText(Double.toString(a) + " %");
                }
                if(!mid3.getText().equals("")) {
                    float midMarks3=Integer.parseInt(mid3.getText());
                    double a=Math.round((midMarks3/total3)*100);
                    pmid3.setText(Double.toString(a) + " %");
                }
                if(!fin3.getText().equals("")) {
                    float finMarks3=Integer.parseInt(fin3.getText());
                    double a=Math.round((finMarks3/total3)*100);
                    pfin3.setText(Double.toString(a) + " %");
                }
            };
        }

    }
});;

//Back Button
        Button backBtn=new Button("Back");
        backBtn.setBounds(40,420,100,40);
        backBtn.setFont(new Font("Arial",Font.PLAIN,15));
        backBtn.addActionListener(new ActionListener() {

            public void actionPerformed(ActionEvent e) {
            f.dispose();
            Main ob=new Main();
            }});

/*Labels*/
f.add(headText);
f.add(headsubText);
f.add(clo1);
f.add(clo2);
f.add(clo3);

f.add(sess);
f.add(mid);
f.add(fin);
f.add(tmarks);

/*Textfields*/

f.add(sess1);
f.add(mid1);
f.add(fin1);
f.add(tmarks1);

f.add(sess2);
f.add(mid2);
f.add(fin2);
f.add(tmarks2);

f.add(sess3);
f.add(mid3);
f.add(fin3);
f.add(tmarks3);
```

```
        //Percentages Label
        f.add(psess1);
        f.add(pmid1);
        f.add(pfin1);
        f.add(psess2);
        f.add(pmid2);
        f.add(pfin2);
        f.add(psess3);
        f.add(pmid3);
        f.add(pfin3);

        f.add(checkOBE);
        checkOBE.setFocusable(false);
        f.add(backBtn);
        backBtn.setFocusable(false);

        //Colors
        sess1.setBackground(Color.LIGHT_GRAY);
        mid1.setBackground(Color.LIGHT_GRAY);
        fin1.setBackground(Color.LIGHT_GRAY);
        tmarks1.setBackground(Color.LIGHT_GRAY);
        sess2.setBackground(Color.LIGHT_GRAY);
        mid2.setBackground(Color.LIGHT_GRAY);
        fin2.setBackground(Color.LIGHT_GRAY);
        tmarks2.setBackground(Color.LIGHT_GRAY);
        sess3.setBackground(Color.LIGHT_GRAY);
        mid3.setBackground(Color.LIGHT_GRAY);
        fin3.setBackground(Color.LIGHT_GRAY);
        tmarks3.setBackground(Color.LIGHT_GRAY);

        //Percentage Colors
//      psess1.setForeground(Color.black);
//      pmid1.setForeground(Color.blue);
//      pfin1.setForeground(Color.blue);
//      psess2.setForeground(Color.blue);
//      pmid2.setForeground(Color.blue);
//      pfin2.setForeground(Color.blue);
//      psess3.setForeground(Color.blue);
//      pmid3.setForeground(Color.blue);
//      pfin3.setForeground(Color.blue);

        Font pFont = new Font("Arial",Font.BOLD,14);
        //Percentage Font
        psess1.setFont(pFont);
        pmid1.setFont(pFont);
        pfin1.setFont(pFont);
        psess2.setFont(pFont);
        pmid2.setFont(pFont);
        pfin2.setFont(pFont);
        psess3.setFont(pFont);
        pmid3.setFont(pFont);
        pfin3.setFont(pFont);


        checkOBE.setBackground(Color.LIGHT_GRAY);
        backBtn.setBackground(Color.LIGHT_GRAY);

        f.setBackground(Color.LIGHT_GRAY);

        f.setSize(680,500);
        f.setLayout(null);
        f.setVisible(true);

        //Making Close Button Work
        f.addWindowListener(new WindowAdapter() {
            public void windowClosing(WindowEvent we) {
                f.dispose();}});

}
    public static void main(String[] args) {
        // TODO Auto-generated method stub
        new Theory();
    }

}
```

## PRACTICAL CLASS

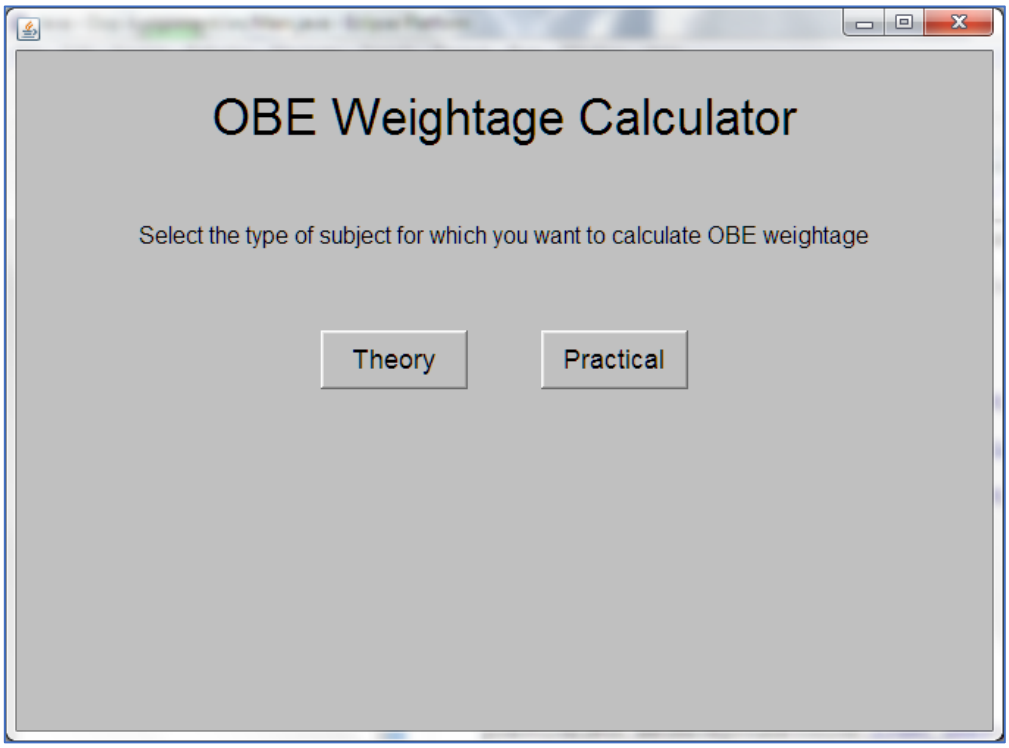
```
import java.awt.*;
public class Practical {
Practical(){
     final Frame f=new Frame();
     Label headText=new Label("OBE Weightage Calculator", Label.CENTER);
     Label headsubText=new Label("For Practical", Label.CENTER);

     Label clo1=new Label("CLO-1");
     Label clo2=new Label("CLO-2");
     Label clo3=new Label("CLO-3");

     Label mid=new Label("Rubrics", Label.CENTER);
     Label sess=new Label("Sessional", Label.CENTER);
     Label fin=new Label("Viva", Label.CENTER);
     Label tmarks=new Label("Total", Label.CENTER);

     final Label psess1=new Label("", Label.CENTER);
     final Label pmid1=new Label("", Label.CENTER);
     final Label pfin1=new Label("", Label.CENTER);

     final Label psess2=new Label("", Label.CENTER);
     final Label pmid2=new Label("", Label.CENTER);
     final Label pfin2=new Label("", Label.CENTER);

     final Label psess3=new Label("", Label.CENTER);
     final Label pmid3=new Label("", Label.CENTER);
     final Label pfin3=new Label("", Label.CENTER);

     final TextField mid1=new TextField();
     final TextField sess1=new TextField();
     final TextField fin1=new TextField();
     final TextField tmarks1=new TextField();

     final TextField mid2=new TextField();
     final TextField sess2=new TextField();
     final TextField fin2=new TextField();
     final TextField tmarks2=new TextField();

     final TextField mid3=new TextField();
     final TextField sess3=new TextField();
     final TextField fin3=new TextField();
     final TextField tmarks3=new TextField();

     Font myFont = new Font("Arial",Font.PLAIN,18);
     headText.setBounds(0,50,680,50);
     headText.setFont(new Font("Arial",Font.PLAIN,34));
     headsubText.setBounds(0,90,680,50);
     headsubText.setFont(new Font("Arial",Font.PLAIN,24));

     clo1.setBounds(90,200,80,20);
     clo2.setBounds(90,280,80,20);
     clo3.setBounds(90,360,80,20);
     clo1.setFont(myFont);
     clo2.setFont(myFont);
     clo3.setFont(myFont);

     sess.setBounds(178,160,80,20);
     mid.setBounds(270,160,80,20);
     fin.setBounds(360,160,80,20);
     tmarks.setBounds(500,160,80,20);
     sess.setFont(myFont);
     mid.setFont(myFont);
     fin.setFont(myFont);
     tmarks.setFont(myFont);
```

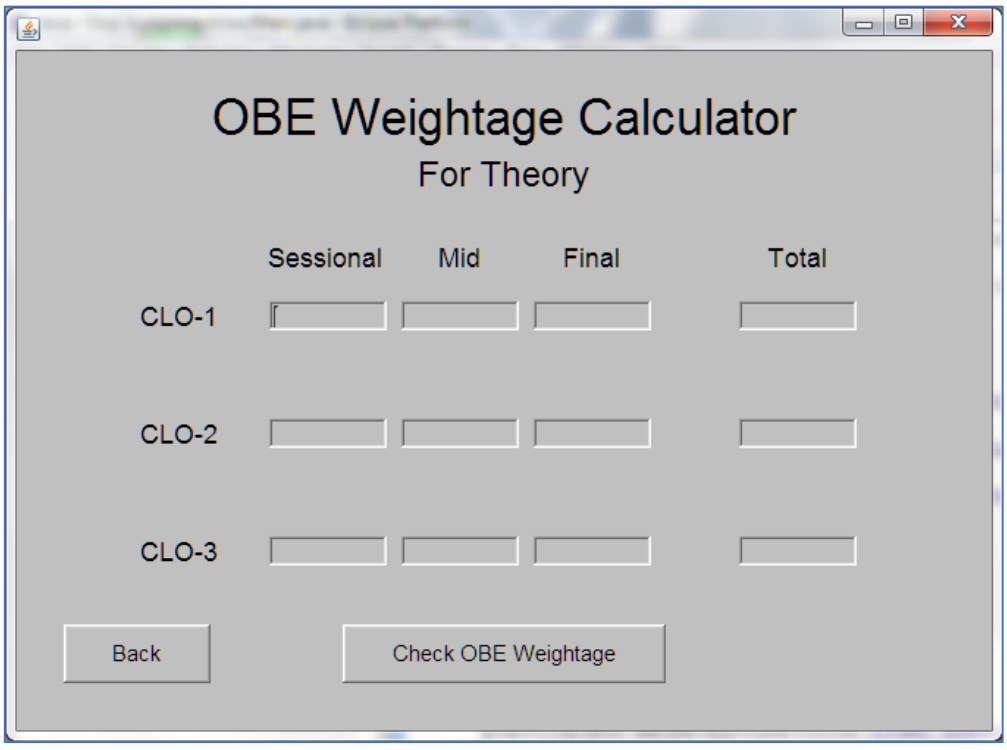
```
sess1.setBounds(180,200,80,20);
mid1.setBounds(270,200,80,20);
fin1.setBounds(360,200,80,20);
psess1.setBounds(180,230,80,20);
pmid1.setBounds(270,230,80,20);
pfin1.setBounds(360,230,80,20);
tmarks1.setBounds(500,200,80,20);

sess2.setBounds(180,280,80,20);
mid2.setBounds(270,280,80,20);
fin2.setBounds(360,280,80,20);
psess2.setBounds(180,310,80,20);
pmid2.setBounds(270,310,80,20);
pfin2.setBounds(360,310,80,20);
tmarks2.setBounds(500,280,80,20);

sess3.setBounds(180,360,80,20);
mid3.setBounds(270,360,80,20);
fin3.setBounds(360,360,80,20);
psess3.setBounds(180,390,80,20);
pmid3.setBounds(270,390,80,20);
pfin3.setBounds(360,390,80,20);
tmarks3.setBounds(500,360,80,20);

//Checking OBE
Button checkOBE=new Button("Check OBE Weightage");
checkOBE.setBounds(230,420,220,40);
checkOBE.setFont(new Font("Arial",Font.PLAIN,15));
checkOBE.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        //CLO-1
        if(!tmarks1.getText().equals("")) {
            float total1=Integer.parseInt(tmarks1.getText());
            if(total1>0){
                if(!sess1.getText().equals("")) {
                float sessMarks1=Integer.parseInt(sess1.getText());
                double a=Math.round((sessMarks1/total1)*100);
                    psess1.setText(Double.toString(a) + " %");
                }
                if(!mid1.getText().equals("")) {
                    float midMarks1=Integer.parseInt(mid1.getText());
                    double a=Math.round((midMarks1/total1)*100);
                    pmid1.setText(Double.toString(a) + " %");
                }
                if(!fin1.getText().equals("")) {
                    float finMarks1=Integer.parseInt(fin1.getText());
                    double a=Math.round((finMarks1/total1)*100);
                    pfin1.setText(Double.toString(a) + " %");
                }
            };
        }
        //CLO-2
        if(!tmarks2.getText().equals("")) {
            float total2=Integer.parseInt(tmarks2.getText());
            if(total2>0){
                if(!sess2.getText().equals("")) {
                float sessMarks2=Integer.parseInt(sess2.getText());
                double a=Math.round((sessMarks2/total2)*100);
                    psess2.setText(Double.toString(a) + " %");
                }
                if(!mid2.getText().equals("")) {
                    float midMarks2=Integer.parseInt(mid2.getText());
                    double a=Math.round((midMarks2/total2)*100);
                    pmid2.setText(Double.toString(a) + " %");
                }
                if(!fin2.getText().equals("")) {
                    float finMarks2=Integer.parseInt(fin2.getText());
                    double a=Math.round((finMarks2/total2)*100);
                    pfin2.setText(Double.toString(a) + " %");
                }
            };
        }
```

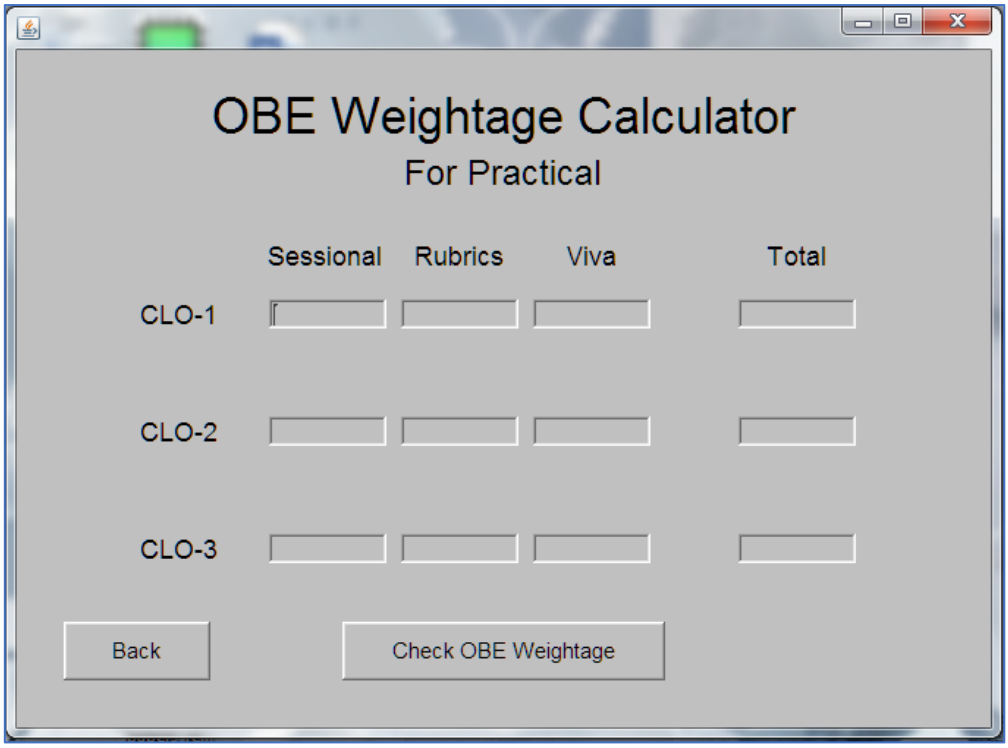
```
        //CLO-3
        if(!tmarks3.getText().equals("")) {
            float total3=Integer.parseInt(tmarks3.getText());
            if(total3>0){
                if(!sess3.getText().equals("")) {
                float sessMarks3=Integer.parseInt(sess3.getText());
                double a=Math.round((sessMarks3/total3)*100);
                    psess3.setText(Double.toString(a) + " %");
                }
                if(!mid3.getText().equals("")) {
                    float midMarks3=Integer.parseInt(mid3.getText());
                    double a=Math.round((midMarks3/total3)*100);
                    pmid3.setText(Double.toString(a) + " %");
                }
                if(!fin3.getText().equals("")) {
                    float finMarks3=Integer.parseInt(fin3.getText());
                    double a=Math.round((finMarks3/total3)*100);
                    pfin3.setText(Double.toString(a) + " %");
                }
            };
        }

    }
});
//Back Button
    Button backBtn=new Button("Back");
    backBtn.setBounds(40,420,100,40);
    backBtn.setFont(new Font("Arial",Font.PLAIN,15));
    backBtn.addActionListener(new ActionListener() {

        public void actionPerformed(ActionEvent e) {
        f.dispose();
        }});

/*Labels*/
f.add(headText);
f.add(headsubText);
f.add(clo1);
f.add(clo2);
f.add(clo3);

f.add(sess);
f.add(mid);
f.add(fin);
f.add(tmarks);

/*Textfields*/

f.add(sess1);
f.add(mid1);
f.add(fin1);
f.add(tmarks1);

f.add(sess2);
f.add(mid2);
f.add(fin2);
f.add(tmarks2);
f.add(sess3);
f.add(mid3);
f.add(fin3);
f.add(tmarks3);
//Percentages Label
f.add(psess1);
f.add(pmid1);
f.add(pfin1);
f.add(psess2);
f.add(pmid2);
f.add(pfin2);
f.add(psess3);
f.add(pmid3);
f.add(pfin3);

f.add(checkOBE);
checkOBE.setFocusable(false);
f.add(backBtn);
backBtn.setFocusable(false);

//Colors
sess1.setBackground(Color.LIGHT_GRAY);
mid1.setBackground(Color.LIGHT_GRAY);
fin1.setBackground(Color.LIGHT_GRAY);
tmarks1.setBackground(Color.LIGHT_GRAY);
sess2.setBackground(Color.LIGHT_GRAY);
mid2.setBackground(Color.LIGHT_GRAY);
fin2.setBackground(Color.LIGHT_GRAY);
tmarks2.setBackground(Color.LIGHT_GRAY);
sess3.setBackground(Color.LIGHT_GRAY);
mid3.setBackground(Color.LIGHT_GRAY);
fin3.setBackground(Color.LIGHT_GRAY);
tmarks3.setBackground(Color.LIGHT_GRAY);
```

```
    //Percentage Colors
//  psess1.setForeground(Color.black);
//  pmid1.setForeground(Color.blue);
//  pfin1.setForeground(Color.blue);
//  psess2.setForeground(Color.blue);
//  pmid2.setForeground(Color.blue);
//  pfin2.setForeground(Color.blue);
//  psess3.setForeground(Color.blue);
//  pmid3.setForeground(Color.blue);
//  pfin3.setForeground(Color.blue);

    Font pFont = new Font("Arial",Font.BOLD,14);
    //Percentage Font
    psess1.setFont(pFont);
    pmid1.setFont(pFont);
    pfin1.setFont(pFont);
    psess2.setFont(pFont);
    pmid2.setFont(pFont);
    pfin2.setFont(pFont);
    psess3.setFont(pFont);
    pmid3.setFont(pFont);
    pfin3.setFont(pFont);


    checkOBE.setBackground(Color.LIGHT_GRAY);
    backBtn.setBackground(Color.LIGHT_GRAY);

    f.setBackground(Color.LIGHT_GRAY);

    f.setSize(680,500);
    f.setLayout(null);
    f.setVisible(true);

     //Making Close Button Work
     f.addWindowListener(new WindowAdapter() {
         public void windowClosing(WindowEvent we) {
             f.dispose();}});

}
     public static void main(String[] args) {
         new Practical();
     }

}
```

## OUTPUT


OBE Weightage Calculator
Select the type of subject for which you want to calculate OBE weightage
Theory
Practical


OBE Weightage Calculator
For Theory
Sessional
Mid
Final
Total
CLO-1
CLO-2
CLO-3
Back
Check OBE Weightage




## CONCLUSION

An outcome-based education goes beyond textbook learning by requiring students to think independently, seek answers and ask crucial questions, debate opposing ideas, and reach their own conclusions/opinions. This calculator will aid users in determining the OBE weightage of their subjects.